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ABSTRACT

Three studies that measured the extent to which college students differed in the amount of control they experienced in situations relating to nuclear war and in ordinary life situations such as school, community, and home are described. In the first study, 91 college-level psychology students viewed the television film "The Day After," and 26 did not. The students were given a modified form of the Tiffany Experienced Control Scales (ECS) on the Friday prior to the Sunday night airing of the film and again following the presentation. Studies II and III were conducted to evaluate whether experienced control with regard to ordinary life stiuations changed over time (in 1984) with the same subjects or different subjects of the same age. Again the ECS were administered. Findings concerning changes in the internal and external locus of control are presented. (RM)

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STUDY I: "THE DAY AFTER": DOES THE MEDIA REALLY HAVE AN IMPACT?

STUDIES II & III: 1984 - WHAT DIFFERENCE DOES IT MAKE IN EXPERIENCED CONTROL?*

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A B S T R A C T

"THE DAY AFTER": DOES THE MEDIA REALLY HAVE AN IMPACT?

Prior to the public airing of the made-for-Television movie "The Day After" a number of media experts attempted to tell us the effect viewing the movie would have on our society. To assess the effect of the movie on college students the concept of Experienced Control was used.

The hypothesis stated that control over the environment and over self for three situations relating to nuclear war would reveal less control after viewing the movie. To test this hypothesis freshman psychology students were given a modified form of the Tiffany Experienced Control Scales (ECS) on the Friday prior to the Sunday night airing of "The Day After" and again on either Monday or Tuesday following the presentation. One hundred and seventeen students were involved in the study. Ninety-one watched the program (Experimental group), while 26 (Control group) did not.

The Before/After differences were subjected to a single factor ANOVA for each situation and component, allowing for 32 comparisons between the Experimental and Control groups for components and 16 comparisons for ratios of the components. The results of the MOVIE situation indicated that viewing the movie had little effect on the Experimental group, but did show significant changes for the Control group. They lost internal control, which was found to be a function of their perceived control from within increasing. This was thought to be a function of the "hipe" that preceeded the movie. Other findings indicated that the situation TALKING about a nuclear war showed the Control group increasing in envionmental control, which was a function of control over the environment increasing. It was surmized that the CFI increase by the Control group prompted the need to talk about the problem which increased their COE skills. (See SUMMARY of Studies II and III.)

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INTRODUCTION

In 1513 Niccolo Machiavelli observed in The Prince that, "...our freewill may not be altogether extinguished, I think it may be true that fortune is the ruler of half our actions, but that she allows the other half or thereabouts to be governed by us." Four hundred and seventy-one years ago it was recognized that "fortune" or other factors contributed to a person's loss of control--whether through her/his own internal conflicts or environmental pressures. After all of these years do we yet know how much control we really experience? Do we know under what conditions we have the most or least control? These are some of the answers sought in this research.

Prior to the airing of "The Day After" on November 20, 1983, the American public was subjected to a media blitz that insured a major viewing audience. Major issues discussed included the effect on public opinion about the continued production and placement of nuclear warheads, instilling fears of the aftermath of a nuclear war, and our inability to deal with such horrors. There was also much second guessing as to the intended message of the movie and thus it was given extensive media time prior to it being shown.

Of concern was the apparent message of the movie, as perceived by early viewers, that the effect would be complete devastation and any efforts at civil defense were totally misleading and futile. Many experts felt that the movie was too optimistic. Others that is was too pessimistic in terms of its' effect on the public.

Since World War II the perceived foibles of youth have often been viewed in the shadow of "the bomb". Youth is more fatalistic, less concerned about the future, more concerned about the future, less self-determined, more moral or less moral than before "the bomb", etc.

The question of whether one's life is affected by the threat of nuclear war includes the question of how much perceived or experienced control one would attribute to such an event. Consequently, this research was designed to measure the extent to which students differed in the amount of experienced control in situations relating to nuclear war, including a before and after viewing of the movie "The Day After" and ordinary life situations such as SCHOOL, COMMUNITY, and HOME.

It was hypothesized that subjects would show no change in control scores for the situations relating to nuclear war and would show no differences from a standardized sample of college students on ordinary life situations.

Liebert, Sprafkin and Davidson (1982) have given us an excellant reference to the many studies and theories bearing on the problem or prceived problems caused by TV viewing. Following all the hipe regarding the airing of "The Day After", we wanted to test whether or not the movie had the power to alter one's experience of control, and if so, for what situations.

DEVELOPMENT OF THE EXPERIENCED CONTROL (ECS) SCALES.

Description of the early form of the scales. The initial work with EC used a Q-Sort technique of cartoon-type pictures of parent/child activities. The test was dubbed the Picture Q Technique (PQT). Early studies (Tiffany and Shontz, 1962 and 1963) indicated that (1) emotionally disturbed preadolescent children experienced significantly more external control than nonemotionally disturbed preadolescent children, (2)

significant inverse relationships were obtained between the experience of external control by both the emotionnally disturbed (-.76) and nonemotionally disturbed (-.65) children and their respective self/ideal congruences, and (3) preadolescent children who experienced high external control were more prone to fantasize their environment as a dangerous and threatening place than children who experienced low external control. It was concluded that the PQT reliably yielded valid response measures of experienced control, as an index of emotional adjustment, in preadolescents (Tiffany and Shontz, 1962). These findings paved the way for the development of the present adult scale.

Influences on scale scores. The EC scales evaluate phenomenal experiences and therefore are subject, in part, to the psychological state of the individual at the time of taking the test.* Demographic variables such as sex and age have a strong influence on the outcome measures. Middle range intelligence scores have no effects on the dependent measures (Dey, 1975). It is estimated that a mental age of 11 is necessary to accurately complete the EC Scales.

Purpose and application of the scales. The EC Scales are designed to evaluate personality problems in the area of control. A review of the literature revealed four substantive kinds of control experienced by everyone. These controls fell into two broad groups; first, there were those controls that had to do with either ourselves or our environments and, second, there were those controls that were either self-determined or non self-determined. These two groups provided independent concepts as noted in Table 1.

TABLE 1. The Relationships of the Four Kinds of Experienced Control.

	SELF (INTERNAL)	ENVIRONMENT (EXTERNAL)
NON SELF-DETERMINED	CFI	CFE
SELF-DETERMINED	COI	COE

CFI=Control from self or internal.
COI=Control over self or internal.
CFE=Control from the environment or external.
COE=Control over the environment or external.

Control from self or internal (CFI) is represented by such experiences as rage, hunger drive, sex drive, fear, anxiety or any internal impulse that is not initiated by the individual. Control over self or internal (COI) is generally what is referred to as "self-control". Control from the environment or external (CFE) events is any force, influence or pressure experieced by the individual coming from the environment, regardless of whether or not it was a veridical perception. Lastly, control over the environment or external (COE) events is depicted by the individual's perceived skills in coping with the CFEs.

It can be inferred from TABLE 1 that CFI and COI are opposing forces as are COE and CFE. These opposing forces are illustrated in FIGURE 1.

*For a discussion of the situation-trait issue the reader is referred to Loevinger and Knoll, 1983.

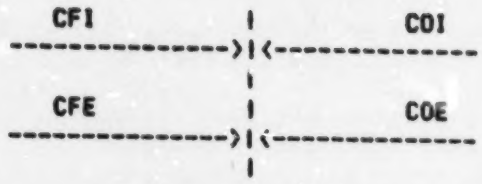

FIGURE 1. The Opposing Characteristics of the Four EC Components.

The fact that the controls at either loci (CFI vs.COI or CFE vs. COE) oppose one another indicates that the respective locus could be in or out of balance for any given situation, suggesting a homeostatic model of control with a theoretical ratio of 1.00. These four components can be evaluated individually or as internal or external ratios. The internal ratio is depicted as COI/CFI and the external ratio is depicted by COE/CFE. Thus, the higher the ratio score, the more control the individual experiences over oneself or one's environment. The relationship of the four components is depicted in Figure 2.

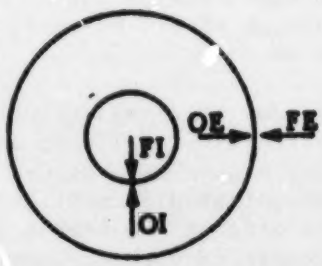

FIGURE 2. A conceptual model of the four kinds of control.

Tiffany et al (1969) state: "By integrating the four possible sources of... control into a single conceptual scheme, Control Theory provides a framework within which it is possible to evaluate and understand clinical data in terms of quantifiable dynamic processes...In addition, the concept of control can play a significant role in understanding the processes involved in and predicting the success of different forms of psychological treatment, whether they involve an intensive dyadic relationship or a social milieu program," (p. 88). Some representative reliability and validity studies may enhance the meaning of the EC concepts.

Reliability studies. A reliability study was conducted by Tiffany (1965) with 72 college subjects retested exactly two weeks after the initial testing. The reliability coefficient was based on the raw scores for the four kinds of control, six situations (HOME, OPPOSITE SEX, SAME SEX, SCHOOL, TEACHER and CONTROL IN GENERAL) and three mental sets (Past, Present, and Future). The Pearson reliability coefficient for the summed scores for the entire set of scales across the 72 conditions was .71.

A study by O'Neil et al (1982) examined log-transformed internal and external ratio scores of 48 inpatients on an alcoholism treatment unit over a two-week period and found the reliability coefficients equal to .57 and .79, respectively. The sum of the ratio scores obtained a reliability coefficient equal to .72. Table 2 shows the reliability coefficients for the four component scores for the two studies.

TABLE 2. Reliability Coefficients* of the Components Scores for Two Studies using Test-Retest Technique Over a Two Week Period.

Components	Tiffany (1965)	O'Neil (1982)
CFI	.55	.58
COI	.71	.56
COE	.79	.64
CFE	.56	.69

*All coefficients were significant at p less than .05. The Tiffany study was a College population while the O'Neil study represented an alcoholic male population.

Validity studies. A content validity study by Markley and Tiffany (1974) of the EC scales, was studied by means of factor analysis for the four EC components. The results supported the fact that 392 college subjects did respond in a manner consistent with the theoretically derived structure of the EC scales, which supports the contention that there are four primary sources of determinants that affect our perception of ourselves and the world around us.

Studies depicting the four areas of control in a variety of situations significantly differentiated psychiatric patients on Admission and Pre-discharge Wards, with the latter group having the higher mean scores in control over internal and external forces (Tiffany, 1967). Subsequent studies similarly differentiated a group of vocational problem cases with histories of chronic job hopping from a socio-economically comparable group of clients who had been employed one year, with the latter group showing significantly higher scores in their control over themselves and their environment (Tiffany, Cowan, & Tiffany, 1970).

Leiker (1975) examined the differences in experienced control between a psychiatric population, who were depressed and suicidal; a psychiatric population, who were neither depressed nor suicidal; and, a non-psychiatric population, who were neither depressed nor suicidal. The results indicated that depressed and suicidal females experienced a significantly greater loss of control over their environment as well as over their internal states, than either of the two other groups. Loss of control, it was observed, is largely a function of the decrease in the individual's perception of COI and COE, rather than an increase in the perceived CFI or CFE. Evans (1980) investigated the general hypothesis that assessment of control perceptions, as a factor in depression, would involve measurement of both generalized expectancies and currently experienced control. Sixty-two college students completed the Rotter I-E scale, the EC scales and the Beck Depression Inventory. Results indicated that the EC dimensions of experienced control over internal and over external forces interacted with I-E scores in predicting depression. In each case, the Rotter INTERNALS with high experienced control reported less depression than low control INTERNALS and both high and low control EXTERNALS.

O'Leary et al (1977) examined a personality trait approach to the learned helplessness model of depression. Fifty-eight male alcoholics were assigned to four groups based upon differential scores on Rotter's Locus of Control Scale and the EC scales. Analysis of scores on the Beck Depression Inventory and the MMPI D scale indicated that subjects who reported experiencing minimal control over stressful events were significantly more depressed than subjects reporting relatively high levels of control. No significant locus of control effect was observed. In general, it was found

that the amount of control experienced over sources of stress appears to be more important in determining the level of depression than one's expectation about control. Other related studies include Donovan and O'Leary (1975), Donovan et al (1975), O'Leary et al (1976), Donovan and O'Leary (1979).

A criterion-related validity study by Tiffany et al, (1978) found that the Rotter I-E scale showed no significant correlation to the EC scales with a chronic unemployed population. An additional reference regarding the absence of a relationship between I-E and EC can be found in Ingram's (1971) study.

A study was conducted by Tiffany and Robinson (1976), in which 37 psychiatric patients were administered the single EC situation of OTHER PEOPLE. The patient rated the items on a seven-point scale. One year after these patients were discharged they were administered the identical items for the second time as part of a follow-up study. The before and after treatment means for the internal and external ratios were compared. Statistically significant gains were made for the loci. The results are shown in Table 3.

TABLE 3. The Before and After Treatment Means of the Internal and External Ratio Scores for Psychiatric Patients. The Situation OTHER PEOPLE was used in this analysis.

	TREATMENT		
	Before	After	
Internal	.78	1.54	(t =2.22; p. (.05)
External	.55	1.20	(t =3.10; p. (.05)

Tiffany and Markley (1975) administered the EC Scales and the I-E Scale to 392 college students. A three principal components factor analysis was performed on the 33 (32 EC items plus the I-E total score) variable R matrices for the total group. The factor analysis indicated that the total I-E score was related primarily to the CFE component (for male, female, and total subjects) of the EC scales for three situations (WORK, SAME SEX, and GENERAL) with low correlation coefficients of .24, .17, and .23, respectively, which were significant at p (.05 for total subjects. The I-E score did not systematically relate to the ratings of COE or to either of the internal components (CFI, COI).

Another criterion-related study was conducted by Evans (1983). He had 100 college students (34 males and 66 females) complete the EC scales, the Rotter I-E Scale, the Marlowe-Crowne scale, and the Beck Depression Inventory. Pearson product-moment correlations were obtained between the various EC scores and the other tests. These values are given in Table 4.

TABLE 4. Correlation Coefficients Between the I-E Score and EC Scores, Marlowe-Crowne Score, and the Beck Depression Inventory Score for Males and Females.

	M-C	BDI	CFI	COI	COE	CFE	COI/CFI	COE/CFE
Females	-.29*	.36*	-.01	-.32*	-.16	.09	-.07	-.11
Males	-.15	.44*	-.08	-.29	-.28	.06	-.05	-.26

* $p < .05$

It is obvious from observing TABLE 4 that the 12 EC scores show little, if any, relationship with I-E. The one significant score (COI for females) leaves a great deal of the variance unaccounted for. In contrast, the Beck Depression Inventory is compared to the EC Scores in TABLE 5.

TABLE 5. Correlation Coefficients Between the Beck Depression Inventory and EC Scores for Males and Females.

	CFI	COI	COE	CFE	COI/CFI	COE/CFE
Females	.06	-.42*	-.33*	-.02	-.18	-.13
Males	.25	.14	.13	.18	-.01	-.17

* $p < .05$

METHOD: Study 1

Subjects. The study utilized 117 subjects, 48 males and 69 females. Ninety-one subjects (41 males; 50 females) viewed the movie "The Day After" and 26 (7 males; 19 females) did not. The subjects were students enrolled in freshman psychology courses at a state university within 200 miles of Kansas City, Mo., which was the setting for the movie.

Scales. The EC scales are composed of nine "situations", which are QUESTIONNAIRE, VIEWING A MOVIE ABOUT A NUCLEAR ATTACK, SCHOOL, TALKING TO OTHERS ABOUT A NUCLEAR WAR, ONE HUNDRED MILES FROM A NUCLEAR ATTACK, COMMUNITY, HOME, OTHER PEOPLE, and GENERAL. These "situations" were selected since they pertain to all individuals and specifically to the present study. The items were designed for the four EC components and for each of the nine "situations". The "situation" QUESTIONNAIRE was included for practice only and was not included in the analysis.

The stem for each item is as follows:

How much do you feel (CONTROLLED BY or CONTROL OVER) pressures, influences or forces that come from (INSIDE or OUTSIDE) yourself (WITHIN, AT, or WHEN) (SITUATION).

The systematic use of the various phrases are determined by the four EC components and the "situations". The four practice items regarding the QUESTIONNAIRE are not random and are given first. The remaining 32 items (four components times 8 situations) are randomly arranged in the six page EC instrument.

Scoring. The component scores were determined from the location of the subject's mark on each item, which was a hundred millimeter line divided by 10ths. At the left end was "0" and "LOW" and at the right end was "100" and "HIGH". The middle of the line was labeled "ABOUT AVERAGE". The component scores were then used to obtain ratios for the Internal (COI/CFI) loci and for the External (COE/CFE) loci.

Procedure. The students were asked to complete the EC Scales in the classroom. Both groups of subjects took the scales the Thursday or the Friday before the movie and the following Monday or Tuesday. The movie was shown on Sunday. Professors gave a minimal amount of extra credit to students completing both the before and after scales.

Analysis. Component and loci means were computed to obtain mean scores for each testing (before and after). The before/after differences were subjected to a single factor ANOVA for each situation and component, allowing for 32 comparisons between the experimental and control groups for components and 16 comparisons for ratios of the components. The before/after difference technique was used because of the repeated measures and since we were not interested in the main effects of BEFORE/AFTER and COMPONENTS. Our primary concern was the change made by the two groups for each component and situation. The loci scores were transformed to common logs to control for asymetry of data distribution.

RESULTS

The results will be discussed by situations. No significant differences were observed for the situations of SCHOOL, TALKING, COMMUNITY, OTHER PEOPLE, and GENERAL. Situations showing significant results are MOVIE, ONE HUNDRED MILES, and HOME.

MOVIE. The situation MOVIE yielded a statistically significant finding for the Internal locus ($F = 3.91$; $d.f. = 1, 115$; $p. = .050$). The Experimental group dropped from a ratio of 1.96 to 1.89 and the Control group dropped from 2.83 to 1.50. These mean scores are depicted in Figure 3.

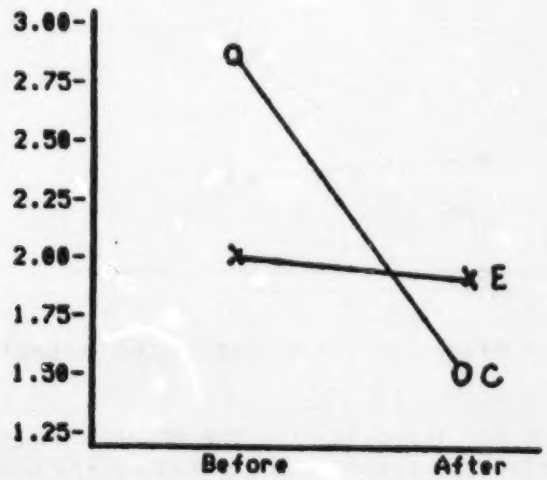

Fig. 3. Internal mean scores for the situation MOVIE.

The greatest change was the decrease in mean Internal ratio for the Control group. To fully understand the meaning of the drop in the ratio, we must look at the Internal components. Figure 4 shows the component that yielded a statistically significant change, which was F1 ($F = 3.65$; $df = 1, 115$; $p = .858$). While the Experimental group increased from 50.68 to 52.84, the Control group increased from 42.89 to 56.81 after the movie.

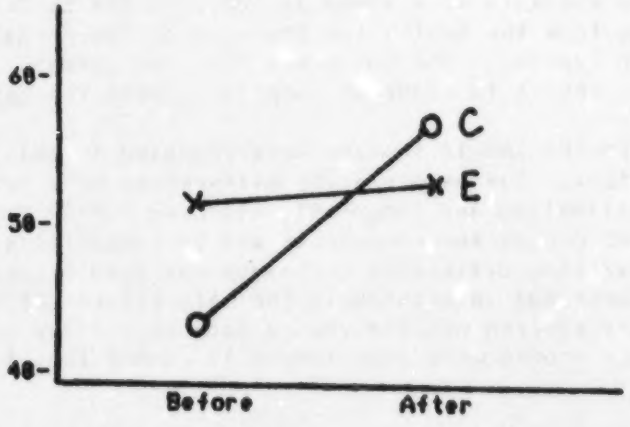

Fig. 4. Mean CF1 scores for the situation MOVIE.

Figure 4 clearly indicates that the Internal change was a function of the Control group increasing in CF1 from Before the movie to After the movie on the MOVIE situation.

ONE HUNDRED MILES. The situation ONE HUNDRED MILES demonstrated significant findings on the External locus. These ratio means are given in Figure 5.

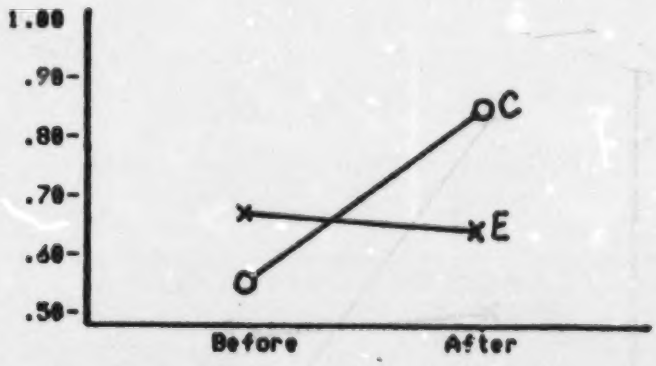

Fig. 5. External ratio means for the situation ONE HUNDRED MILES.

The External ratio means for the situation ONE HUNDRED MILES, found in Figure 5, demonstrate that the Control group increased from .54 Before the movie to .94 After the movie. The Expermental group showed little change (.67 to .63). To fully understand the change made by the Control group, we must examine the statistically significant COE component scores ($F=6.42$; $d.f. = 1, 115$; $p. = .813$), which are found in Figure 6.

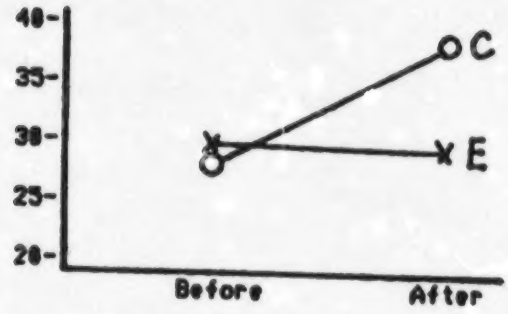

Fig. 6. Mean COE scores for the situation ONE HUNDRED MILES.

Figure 6 illustrates that the gains from Before to After the movie at the External locus were largely a function on the Control groups' increase in COE, which increased from 27.15 to 37.88. Although these scores represent a significant increase, they are considered quite low. The Experimental group remained essentially unchanged (29.13 to 28.84).

HOME. From Figure 7 we learn that both the Experimental and Control groups show that the CFE component for the HOME situation changes ($F = 5.85$; d.f. = 1, 115; $p. = .027$) after the movie. The Experimental group shows a significant decrease from 58.28 to 43.23, while the Control group shows an increase of 47.81 to 51.92 in environmental control.

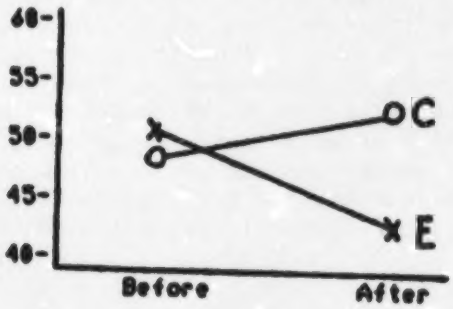

Fig. 7. Mean CFE scores for the HOME situation.

SUMMARY: Study 1

Out of the eight situations only three showed statistically significant changes. These three situations (MOVIE, HUNDRED , and HOME) can be summarized as in TABLE 6.

TABLE 6. A summary of significant findings for Study I.

Situation	Locus	Change	Component	Change
MOVIE	Internal	C decreased	CFI	C increased
ONE HUNDRED	External	C increased	COE	C increased
HOME			CFE	E decreased C increased

C = Control; E = Experimental.

The MOVIE situation apparently showed no effect on those who viewed the movie. However, those who did not, showed an increase in control from inside themselves, representing a greater sense of their impulses--possibly fear. This same group found that being ONE HUNDRED MILES from a nuclear attack increased their control over the environment After the movie. The situation HOME only showed an FE decrease for those who viewed the movie and a slight increase for those who did not. On the whole, the movie had little or no effect on those who viewed it, except to lower their experienced control from the environment for the HOME situation. Relative to the nuclear holocaust, home may become "Home Sweet Home".

The surprising finding in Study I was the effect on the Control group. With all the hipe about "The Day After", we are not sure they are the Control group. Perhaps viewing the movie at least nullified the scare tactics of all the debate about whether or not the movie should even go public. We personally thought the movie was a disappointment, but we wouldn't have missed it for anything. Many students expressed the same feelings. For those who made a conscious choice not to see the movie at a prime time, may have done so because of the fear of what they were going to see. Such a response could account for the increase in CFI and the need to talk about the idea of a nuclear war would naturally follow, consequently the increase in COE. The CFE increase for this group in the HOME situation was only moderate and needs no comment.

1984: WHAT DIFFERENCE DOES IT MAKE IN EXPERIENCED CONTROL? STUDIES II and III

Orwell's reversal of the last two digits of 1948 has left us all wondering what the experience of control will be in 1984. To analyze the specific effects of 1984, we have used the Tiffany Experienced Control (EC) Scales. The scales have been used in a variety of studies as indicated in the first presentation on "The Day After". Representative studies are work inhibition, mental illness, alcoholism, depression, and agoraphobia. To test the effects of experienced control in 1984, we used both a subject and design replication.

METHOD: Study II

Hypothesis. Since this is a pilot study, we are assuming the null hypothesis for all effects of the study. We did not expect individuals to show any change in experienced control when their 1984 EC scores were compared to their EC scores from an earlier time period.

Subjects. The subject replication consists of an earlier administration of the EC scales to 35 students (11 males and 24 females) at a medium-size midwestern university and a repeat administration about 8 years later using the same 35 subjects.

Scales. The EC scales examines the four components of control (CFI, COI, COE, and CFE) across the eight situations, which for this study are WORK, SCHOOL, OPPOSITE SEX, SAME SEX, COMMUNITY, OTHER PEOPLE, HOME, and GENERAL. The four EC components are the same as used in the early study: (1) control experienced from within, (2) control experienced over oneself, (3) control experienced over the environment, and (4) control experienced from the environment.

Analysis. An Internal and External ratio is calculated from the four components for each situation. Consequently, an analysis of both the components and ratios was conducted by using ANOVAs to test the before/after effects for each component and situation.

RESULTS

WORK. Components. Not significant. Ratios. Not significant.

SCHOOL. Components. Not significant. Ratios. Not significant.

OPPOSITE SEX. Components. Not significant. Ratios. Not significant.

SAME SEX. Components. Not significant. Ratios. Not significant.

COMMUNITY. Components. COI component was found to be signifcant between the two groups ($F = 9.39$; $df = 1, 68$; $p = .003$). An inspection of the means by Sex indicated that the females COE score of 74.75 significantly decreased over the time period to 48.75 ($t = 3.17$; $p = .003$). OE was also found to be significant ($F = 7.51$; $df = 1.68$; $p = .008$), which was due to the males showing a significant drop from 71.36 to 45.18 ($t = 3.08$; $p = .006$). Ratios. Not significant.

HOME. Components. COI was significiant ($F = 8.76$; $df = 1, 68$; $p = .004$), which was primiarly a function of the decrease of males from time 1 to time 2 (82.89 to 63.87; $t = 2.94$; $p = .008$). Ratios. Not significant.

OTHER PEOPLE. COI was significant ($F = 5.88$; $df = 1, 68$; $p = .027$), which was a function of females dropping from 73.83 to 68.88 ($t = 2.26$; $p = .027$). CFE significantly increased for both males and females from a score of 37.89 to 48.11 ($F = 4.13$; $df = 1, 68$; $p = .046$). Ratios. Not significant.

GENERAL. Components. Not significant. Ratios. Not significant.

The COI scores across all situations for the two groups was signficant ($F = 6.89$; $df = 1; 68$; $p = .816$), which was a function of females dropping from 71.42 to 63.45 ($t = 2.08$; $p = .041$). There were no signficant changes for the other three components across situations. Ratios. Not significant.

SUMMARY

Only three situations (HOME, COMMUNITY, and OTHER PEOPLE) showed significant findings. These are given in TABLE 7.

TABLE 7. A summary of significant findings for Study II.

Situation	Sex	Component	Change
HOME	males	COI	decreased
COMMUNITY	females	COI	decreased
	males	COE	decreased
OTHER PEOPLE	females	COI	decreased
	both	CFE	increased

The general findings of Study II, which compared 35 subjects with themselves approximately 8 years later, revealed some interesting points. The over-all COI scores for the 24 females showed a significant drop over the time period. This was particularly true in situations COMMUNITY and OTHER PEOPLE. In contrast, the 11 males generally showed decreases in COE for the COMMUNITY situation and COI for the HOME situation. The only sign of any significant increase in perceived control experienced over themselves, for both sexes, appeared at the CFE component for the OTHER PEOPLE situation. The findings indicate that COI showed a remarkable drop for females over the past eight years. Since there is not a corresponding increase in CFI for females, the only conclusion that can be arrived at is that women are feeling less of a need to maintain high self-control. In other words, they are just letting it all hang out in both the COMMUNITY and with OTHER PEOPLE. The males also seem to be letting it hang out a bit more, but they are doing it at HOME. Neither group showed any gains in COE, however, both groups showed significant loses at CFE, which is quite a contrast to females showing less self-control around OTHER PEOPLE. Even though females feel more control from others, they are still speaking their mind more than the males and more they they use to.

METHOD: Study III

Hypothesis. Again we are assuming the null hypothesis for this study. We do not expect individuals to show any change in experienced control when their 1984 EC scores are compared to EC scores from an earlier time period.

Subjects. In this third and last study we replicated an EC study conducted in 1965. At that time we administered EC Scales to 72 (27 males, 45 females) college freshman at a large midwestern university. These scores were compared to similar scales administered almost 20 years later to a similar college freshman group of 54 (43 males, 11 females) in the same university and the same department.

Scales and Procedure. The situations used were HOME, OPPOSITE SEX, SAME SEX, SCHOOL, TEACHER, and GENERAL. In this study, the situations were not randomized as in the other two studies. Consequently, the subjects were asked to mask each scale item. This procedure consisted of providing each subject with an approximately 8 x 10 inch piece of heavy poster paper with a window frame cut in the lower half. The size of the frame was just large enough so each subject could only see one scale at a time. By sliding the frame down the page the subject was unable to see any of the previously marked items and was attentive to only the "framed" item.

RESULTS

Of interest here is the interaction effects of Before/After by Components and Before/After by Ratios. These interactions are examined for each situation individually.

HOME. Components. Not significant. Ratios. Not significant.

OPPOSITE SEX. Components. The interaction effect was signficant ($F = 3.63$; d.f. = 3, 372; $p = .013$), which was primarily OE decreasing from 64.42 to 55.87 ($t = 2.34$; $df = 124$; $p = .020$). CFI showed a trend toward increasing from 61.39 to 68.17 ($t = 1.82$; $df = 124$; $p = .068$). Ratios. Not significant.

SAME SEX. Components. Not signficant. Ratios. Not significant.

SCHOOL. Components. Not signficant. Ratios. Not significant.

TEACHER. Components. Not signficant. Ratios. Not significant.

GENERAL. Components. The interaction effect for Before/After was significant ($F = 3.36$; $df = 3, 372$; $p = .018$), which was primarily a function of CFI increasing from 65.18 to 74.63 ($t = 2.49$; $df = 124$; $p = .014$). Ratios. Not significant.

SUMMARY

The situations of OPPOSITE SEX and YOURSELF IN GENERAL yielded significant finding. These are provided in TABLE 8.

TABLE 8. A summary of significant findings for Study III.

Situation	Component	Change
OPPOSITE SEX	CFI	increased
	COE	decreased
GENERAL	CFI	increased

The comparison of the 72 college freshman with the 54 college freshman about 20

years later revealed very few significant changes--although remarkable ones. CFI stood out as showing significant increases for the situations OPPOSITE SEX and GENERAL. There was no sex division in these analyses, which may yield some interesting findings since there were 24 males in the first group and 43 in the last and 45 females in the first group and 11 in the last. This change in sex ratio from time one to time two should be controlled in future studies, however, the increased CFIs for the entire group tells us something about impulse control and how that has changed over this period. This is particularly interesting since there is no concommitant increase in self-control. Another interesting finding is the decrease in COE for the OPPOSITE SEX situation for both sex groups. When you examine the changes in these two components (CFI and COE) for the situation OPPOSITE SEX you have to conclude that college freshman lean more on their impulses in interpersonal relationships than on their social skills.

Has 1984 brought with it increased fears of being controlled? Our two longitutinal studies would tell us no. Orwell was wrong, at least at far as college freshmen in out third study are concerned. However, there is some evidence that as the college group increases in age so does CFE with OTHER PEOPLE. Does this represent a shift in values from social skills to more impulse behavior? We cannot come to such a conclusion from this study, but it obviously does not support Orwell's position. The date 1984 does not make any difference in experienced control from the environment as predicted by Orwell's novel. However, 1984 does point up some other control differences that we need to understand better.

CONCLUSIONS

A six year old daughter set up her lemonade stand one hot summer day and asked her father where she could get her permit to sell lemonade. Is this more control? Some would say "yes", but we think not. To seek regulatory relief is not the same as feeling control. Security checks at airports are such a form of relief. At least you feel a bit more certain that you will reach your destination. Our interest here is just how much of an assult on our freedom has Big Brother been? Amazingly little according to our results. For example, the movie "The Day After" had no significant effect on the viewers in terms of increased external control. Only the non-viewers felt more fear, which was probably a response to all the pre-movie discussions on TV about such things as a "nuclear winter".

Studies II and III were conducted to evaluate whether or not experienced control changed over time with the same subjects or different subjects at the same age and using the same methodology. The major findings support changes primarily at the Internal locus. Generally, it appears that CFI is on the increase and COI is on the decrease. What does this mean? Is this a function of the "me" generation thinking? Are we becoming more narcissistic and thus guided by our impulses? I am seeing more in my practice now than ever before. Over the last 10 to 15 years violent crime has soared. Women are more involved in crime than every before. Is body building for physical fitness or self-admiration? We have learned that self-gratification will make you successful. Watch the beer ads. We put a great deal of stress on good looks. We have become impulse driven. Those who use alcoholic beverages is dropping to a lower age every year. Is this the price for affluence? The result is difficulty in interpersonal skills. Letting it all hang out is good for some things at the right time and in the right place, but as a life-style it can only lead to loneliness and frustration. The world does not owe anybody a living and selfish grabbing is not the answer. We can't all win the million dollar lottery.

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TABLE FOR COMPARISON OF MEANS AND STANDARD DEVIATIONS FOR 91 Experimental SUBJECTS BEFORE AND AFTER VIEWING "THE DAY AFTER" FOR SITUATIONS BY EC COMPONENTS.

SITUATIONS		FI		OI		OE		FE	
		B	A	B	A	B	A	B	A
MOVIE	$\bar{X}$ =	50.68	52.04	61.00	58.02	56.42	51.10	50.65	50.85
	SD =	21.81	23.92	19.18	22.34	21.00	24.01	23.55	22.59
SCHOOL		49.70	46.56	67.85	69.29	61.44	58.48	49.92	44.71
		22.72	21.62	17.95	18.45	19.23	18.85	20.33	19.62
TALKING		51.04	50.89	56.09	53.90	56.19	54.44	47.73	46.63
		19.83	21.86	19.09	21.00	18.82	21.99	20.67	19.57
ONE HUNDRED		60.27	60.43	32.70	26.90	29.13	28.04	60.55	65.82
		24.24	27.96	24.91	23.74	24.52	23.05	26.00	26.32
COMMUNITY		47.49	41.38	70.19	69.92	60.35	58.10	42.32	41.62
		21.93	20.83	17.97	17.93	21.20	20.95	19.35	18.50
HOME		48.29	45.37	70.43	69.10	65.66	64.49	50.20	43.23
		23.19	23.76	19.59	18.65	20.10	18.47	22.41	20.34
OTHER PEOPLE		57.14	49.23	70.37	70.35	61.25	63.34	49.07	41.97
		22.06	22.50	17.92	16.01	19.79	19.44	20.79	18.75
GENERAL		52.12	49.31	66.13	60.53	62.65	57.60	46.31	44.30
		22.97	23.19	21.01	19.56	19.00	21.94	19.61	20.50

TABLE FOR COMPARISON OF MEANS AND STANDARD DEVIATIONS FOR 26 CONTROL SUBJECTS BEFORE AND AFTER THE MOVIE "THE DAY AFTER" FOR SITUATIONS BY COMPONENTS.

SITUATIONS		FI		OI		OE		FE	
		B	A	B	A	B	A	B	A
MOVIE	X =	42.88	56.81	54.69	52.73	59.08	57.69	49.54	47.12
	SD =	23.68	23.62	23.89	24.81	22.06	24.29	21.12	23.28
SCHOOL		47.88	52.92	57.04	66.50	53.07	53.96	48.08	50.96
		17.37	23.74	19.79	17.51	15.79	19.84	18.35	20.26
TALKING		51.31	47.85	53.27	50.73	56.19	51.69	59.62	53.12
		17.85	22.13	17.36	23.97	18.06	21.68	17.78	22.24
ONE HUNDRED		57.23	57.23	32.12	26.98	27.15	37.88	64.54	64.54
		25.18	25.66	27.90	23.74	24.29	23.57	22.98	23.45
COMMUNITY		45.15	43.65	73.77	68.92	57.65	58.77	41.12	46.19
		19.32	23.24	16.29	12.93	19.82	19.29	17.53	20.68
HOME		42.00	49.04	67.46	72.00	64.06	62.12	47.81	51.92
		20.73	26.59	16.91	16.90	22.63	19.20	20.81	20.25
OTHER PEOPLE		52.23	49.15	61.38	68.00	60.12	56.42	46.58	46.58
		18.00	21.63	16.17	13.31	12.89	17.58	17.04	20.94
GENERAL		48.31	53.12	65.04	67.27	57.69	57.42	50.85	51.12
		22.43	23.32	14.95	15.18	16.90	18.05	17.87	19.79

TABLE FOR THE COMPARISON OF THE MEANS AND STANDARD DEVIATIONS FOR 35 SUBJECTS IN 1972-74 AND 1982-84 FOR SITUATIONS BY COMPONENTS.

SITUATIONS		FI		OI		OE		FE	
		B	A	B	A	B	A	B	A
WORK	$\bar{X}$ =	48.31	47.83	70.34	67.34	57.97	52.46	57.14	59.11
	SD =	23.97	24.83	19.04	21.42	21.31	21.57	20.13	21.56
SCHOOL		45.37	48.57	68.37	61.03	58.20	53.54	45.31	52.17
		21.64	22.61	23.96	18.99	21.36	23.41	20.08	22.73
OPPOSITE SEX		53.20	51.97	67.74	62.06	67.31	61.06	41.77	50.40
		26.10	21.84	20.70	21.44	18.45	20.99	24.57	21.08
SAME SEX		40.43	41.94	74.43	76.03	73.26	71.37	35.63	39.00
		23.08	22.90	13.20	12.72	13.13	17.96	21.78	20.67
COMMUNITY		47.26	35.57	75.77	56.43	61.71	44.57	30.97	30.06
		25.18	28.74	16.31	33.60	21.44	30.17	19.13	31.09
HOME		43.77	45.20	76.91	63.31	71.20	69.49	34.46	35.34
		27.93	26.28	15.81	22.12	20.16	23.83	24.53	20.71
OTHER PEOPLE		46.20	51.89	74.54	64.66	62.09	62.69	37.89	48.11
		24.79	21.51	13.99	21.85	19.47	20.53	19.77	22.26
GENERAL		49.54	48.91	72.57	68.71	65.89	60.54	40.83	41.80
		24.93	25.19	18.53	21.76	18.89	22.21	21.63	23.84
TOTAL		46.76	46.49	72.59	64.95	64.70	59.49	40.50	44.50
		19.16	13.59	12.14	13.71	12.30	12.87	14.10	13.50

TABLE FOR COMPARISON OF MEANS AND STANDARD DEVIATIONS FOR 72 SUBJECTS IN 1965 AND 54 SUBJECTS IN 1984 FOR SITUATIONS BY COMPONENTS.

SITUATIONS		FI		OI		OE		FE	
		B	A	B	A	B	A	B	A
HOME	$\bar{X}$ =	65.64	69.41	71.28	76.17	60.88	60.70	50.28	49.35
	SD =	21.86	20.57	13.31	13.16	20.86	21.32	23.21	24.75
OPPOSITE SEX		61.39	68.17	70.68	66.22	64.42	55.87	49.97	52.78
		21.56	19.48	19.47	21.00	19.45	21.43	21.91	21.94
SAME SEX		61.82	67.06	72.94	72.89	63.58	63.76	43.31	48.78
		23.02	22.58	18.11	16.00	18.26	20.58	19.98	23.47
SCHOOL		60.86	65.93	67.35	72.00	53.68	51.81	61.07	55.89
		20.15	23.00	18.34	15.00	21.20	21.75	20.50	21.67
TEACHER		59.31	59.72	67.24	65.26	54.38	48.70	61.07	55.94
		21.62	20.46	18.19	18.69	23.84	22.09	20.88	23.08
GENERAL		65.10	74.63	71.68	76.31	59.65	56.69	53.65	50.89
		21.42	21.12	17.71	19.89	17.46	21.68	16.48	22.09